

What is claimed is:

1. A concentration monitor for monitoring a concentration of a plurality of use solutions, each of said plurality of use solutions being, at least, a concentrate in a diluent, each of said plurality of use solutions having a resistivity which varies as a function of both temperature and an amount of said concentrate contained in a given amount of said diluent, comprising:

a resistivity probe adapted for use with at least one of said plurality of use solutions for taking a measurement related to said resistivity of said at least one of said plurality of use solutions;

a temperature sensor adapted for use with said at least one of said plurality of use solutions for taking a measurement related to said temperature of said at least one of said plurality of use solutions; and

a controller, operatively coupled to said resistivity probe and said temperature sensor, calculating said concentration of said at least one of said plurality of said use solutions based upon a predetermined algorithm using said resistivity and said temperature for said particular one of said at least one of said plurality of use solutions, said algorithm being based upon knowledge of said at least one of said plurality of use solutions being measured.
2. A concentration monitor as in claim 1 wherein said controller stores said knowledge of which of said at least one of said plurality of use solutions are being measured.
3. A concentration monitor as in claim 2 wherein said controller stores said knowledge, at least in part, by use of a user controllable setting.
4. A concentration monitor as in claim 1 wherein said controller also reports said concentration to a user.
5. A concentration monitor as in claim 1 wherein said algorithm is linear.
6. A concentration monitor as in claim 1 wherein said controller performs a function based upon said concentration.

7. A concentration monitor as in claim 6 wherein said function adds concentrate to said diluent when said concentration falls below a certain level.
8. A concentration monitor for monitoring a concentration of a use solution, said use solution being, at least, a concentrate in a diluent, and having a resistivity which varies as a function of both temperature and an amount of said concentrate contained in a given amount of said diluent, comprising:
 - a resistivity probe adapted for use with said use solution for taking a measurement related to said resistivity of said use solution;
 - a temperature sensor adapted for use with said use solution for taking a measurement related to said temperature of said use solution; and
 - a controller, operatively coupled to said resistivity probe and said temperature sensor, said controller:
 - storing an identification of which particular said use solution is being monitored; and
 - calculating said concentration of said use solution based upon a predetermined algorithm using said resistivity and said temperature for said use solution, said algorithm being based upon said identification of said use solution being measured.
9. A concentration monitor as in claim 8 wherein said storing of said identification is accomplished, at least in part, by a user controllable setting.
10. A concentration monitor as in claim 8 wherein said controller also reports said concentration to a user.
11. A concentration monitor as in claim 8 wherein said algorithm is linear.
12. A concentration monitor as in claim 8 wherein said controller performs a function based upon said concentration.
13. A concentration monitor as in claim 12 wherein said function adds concentrate to said diluent when said concentration falls below a certain level.

14. A method of monitoring a concentration of a plurality of use solutions, each of said plurality of use solutions being, at least, a concentrate in a diluent, each of said plurality of use solutions having a resistivity which varies as a function of both temperature and an amount of said concentrate contained in a given amount of said diluent, using a resistivity probe adapted for use with at least one of said plurality of use solutions for taking a measurement related to said resistivity of said at least one of said plurality of use solutions and a temperature sensor adapted for use with said at least one of said plurality of use solutions for taking a measurement related to said temperature of said at least one of said plurality of use solutions, comprising the steps of:

selecting said selected one of said plurality of use solutions from said plurality of use solutions;

measuring said resistivity of said selected one of said plurality of use solutions using said resistivity probe;

measuring said temperature of said selected one of said plurality of use solutions using said temperature probe; and

calculating said concentration of said at least one of said plurality of said use solutions based upon a predetermined algorithm using said resistivity and said temperature for said particular one of said at least one of said plurality of use solutions, said algorithm being based upon which of said plurality of use solutions has been selected.
15. A method as in claim 14 further comprising the step of reporting said concentration to a user.
16. A method as in claim 14 further comprising the step of adding concentrate to said diluent when said concentration falls below a certain level.
17. A method as in claim 14 further comprising the steps of inserting said resistivity probe into a selected one of said plurality of use solutions and inserting said temperature probe into said selected one of said plurality of use solutions.